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Abstract:

concepts are the basic units of theory development and the building blocks of social research, this is because without well-developed conceptual definitions for the research terms, it is impossible to develop a coherent theory, moreover, it is impossible to develop a valid measure of a concept that is not precisely defined, It should be noted, however, the importance of defining concepts differs depending on the adopted research approach. In the quantitative approach, the concepts are clarified and connected to empirical indicators which will be used to operationalize these concepts before the research begins, while in qualitative research concepts remain under construction during the research not only in the operational terms, but also in theoretical terms. Given the importance of defining the study concepts, this paper evaluated the available definitions of the concept quality in order to find or propose a valid and reliable definition of quality.

Keywords: Quality, concepts, quality management

Introduction:

Concepts are the basic units of theory development and the building blocks of social research (Zikmund, 2003). This is because without well-developed conceptual definitions for the research terms, it is impossible to develop a coherent theory (Summers, 2001). For example, we cannot develop a meaningful theoretical rationale for why concept A should be related to concept B if the exact meaning of each of these two concepts has not been established; moreover, it is impossible to develop a valid measure of a concept that is not precisely defined (Summers, 2001). Cooper and Schindler (1998:38) have gone so far as to state that "... confusion about the meaning of the research concepts can destroy a research study's value without the researcher even knowing it. If words have different meanings to the parties involved, then they are not communicating on the same wavelength. Definitions are one way to reduce this danger".

It should be noted, however, the importance of defining concepts differs depending on the adopted research approach (Zikmund, 2003). In the quantitative approach, the concepts are clarified and connected to empirical indicators which will be used to operationalize these concepts before the research begins, while in qualitative research concepts remain under construction during the research not only in the operational terms, but also in theoretical terms (Corbetta, 2003). As a result current study uses the quantitative approach (see methodology, Chapter 3), the study concepts/constructs have been defined and operationalized before the beginning of the empirical research.

As the current study investigates the relationship between quality management and competitive advantage; the concept of "quality" and the constructs of "quality management", and "competitive advantage" had to be defined and then operationalized before the beginning of the empirical research. In the next section these constructs/concept are defined and later the way they were operationalized is explained in the methodology (Chapter Three).

An extensive review of the literature was conducted to find out what makes a good definition. One criterion was adopted from Routio (2009) who identified four criteria a definition should meet: (1) Validity, which means that the definition matches the concept; it refers to just the concept and it measures what it intends to measure, nothing else. (2) Reliability means that if anyone repeats the measurement used, the result will always be the same. (3) The definition must

not be a vicious circle, for example, defining quality management as the management of quality. (4) Figurative or obscure language is not used. These four criteria are used to evaluate the existing definition of quality; quality management (QM) and competitive advantage (CA) as follows.

Quality definition

Although the term quality is quite widely used by practitioners and academics, there is no generally agreed definition of it, since different definitions of quality are appropriate under different circumstances (Garvin, 1984; Reeves and Bednar, 1994; Seawright and Young, 1996; Russell and Miles, 1998; Beaumont and Sohal, 1999; Sebastianelli and Tamimi, 2002; Ojasalo, 2006). Indeed, quality has been defined as excellence (Tuchman, 1980), value (Feigenbaum, 1951), conformance to specifications (Shewhart, 1931; Levitt, 1972), conformance to requirements (Crosby, 1979), fitness for use (Juran, 1974; 1988), product desirable attributes (Leffler, 1982), loss avoidance (Taguchi, 1987) and meeting customer expectations (Ryall and Kruithof, 2001; ISO 9000, 2005) (see Appendix 1). A universally accepted definition of quality does not exist for a variety of reasons (these reasons are discussed in detail later in this section). For example, broad definitions (e.g. meeting expectations, excellence) are difficult to operationalize. While narrow definitions (e.g. conformance to specifications, loss avoidance) are not sufficiently comprehensive to capture the richness and complexity of the concept (Reeves and Bednar, 1995).

Several definitions of quality presented in Appendix 1 have been evaluated using Routio's (2009) criteria in order to find or propose a new definition for the purpose of this study as follows.

Garvin (1984) described five basic approaches for quality definition (the transcendent approach; the product based approach; the manufacturing based approach; value-based approach; and the user-based approach). These approaches have been adapted, refined and expanded throughout the literature to define quality (Forker, 1991; Reeves and Bednar, 1994; Seawright and Young, 1996; Russell and Miles, 1998; Fynes and Voss, 2001; Sebastianelli and Tamimi, 2002; Sousa and Voss 2002; Ojasalo, 2006; and Zu et al., 2008)

The transcendent approach of quality as excellence (Tuchman, 1980:380) is derived from philosophy and borrows heavily from Plato's discussion of beauty. In this approach, quality is synonymous with innate excellence (Seawright and Young, 1996). This definition of quality is invalid and contains a figurative language according to Routio's (2009) criteria, as it can be questioned who determines standards of excellence and who determines to what extent excellence has been achieved (Reeves and Bendar, 1995). Moreover, for researchers, a definition of quality based on excellence makes it difficult, if not impossible, to measure quality in the empirical field (Garvin, 1984), which means that it fails to meet the reliability criterion because it is difficult to consistently measure quality.

Given the limitations of defining quality as excellence, Leffler (1982) introduced a measurable (reliable) definition of quality -Garvin (1984) described it as the product based approach- where quality is based on the existence or absence of a particular attribute. If an attribute is desirable, greater amounts of that attribute, according to this definition, would label that product as one of a higher quality. Leffler's (1982) definition of quality, however, is also invalid according to Routio's (2009) criteria (definition does not match the concept) for two reasons. First, quality under this definition may be inappropriate for services, especially when a high degree of human contact is involved (Reeves and Bednar, 1995). Second, according to Leffler's (1982) definition, quality can only be gained at higher cost, because quality reflects the quantity of desirable attributes that a product includes, and because attributes are believed to be costly to produce, quality goods will be more expensive (Garvin, 1984). However, Ishikawa and Lu (1985) argued that quality can be obtained at an acceptable price (value based approach); therefore, the product based approach of defining quality is not a complete definition of quality, in other words not valid (as the definition does not match the concept) according to Routio's (2009) criteria.

Likewise, another measurable (reliable according to Routio's 2009 criteria) definition of quality was introduced by Shewhart (1931) and Levitt (1972), Garvin (1984) described it as the manufacturing approach, where quality is defined as conformance to specification. Quality of conformance reflects the degree to which a product meets certain design standards. Deviations from design specification result in inferior quality, and accordingly increased costs due to rework, scrap, or product failure (Reeves and Bednar, 1995). However, customers may not know or care about how well the product conformed to some internal specifications they did not

require (Oliver, 1981). Moreover, this definition fails to address the unique characteristics of services, which require a high degree of human contact (Reeves and Bednar, 1995; Sebastianelli and Tamimi, 2002). As a result, the manufacturing approach of defining quality does not meet the validity criteria (definition does not match the concept, incomplete definition of quality), in particular, it is uncompleted (invalid) definition of quality for the hotel industry, which is made up of both goods and services, where goods reflect the tangible aspects such as a lobby or a guest room and services involve guest interactions with staff or hotel facilities (Barrows and Powers, 2009).

A widely used definition of quality was introduced by Juran (1951) and Juran and Godfrey (1999:2.2) (Garvin, 1984 named it as the user-based approach) which meets all the previous conditions, where quality is defined as “fitness for use”. The word use is associated with customer requirements, while *fitness* suggests conformance to measurable product/service characteristics (Nanda, 2005). On the other hand, product/service price may influence the level of the customer satisfaction (Sebastianelli and Tamimi, 2002). For this reason, Broh (1982) and Ishikawa and Lu (1985) refined Juran’s (1951) definition of quality to be fitness for use at an acceptable price (value based approach). Broh (1982) and Ishikawa and Lu’s (1985) modification strengthens Juran’s (1951) definition of quality, but it is still an invalid definition of quality according to Routio’s (2009) criteria because customer requirements are continuously changing (Chacko, 1998; Bowie and Bottle, 2004) and what customers require today is not what they required yesterday and will not be what they will require tomorrow (Kano et al., 1984; Hoyle, 2007). Similarly, what the management can do for them today is not what could be done for them yesterday or what it will be possible to do for them tomorrow (Ryall and Kruithof, 2001). In that sense, any attempt to introduce a valid definition of quality should address the continuous review of customer requirements (Hoyle, 2007). As a result, many previous definitions of quality such as those quality definitions proposed by Oakland (2003), American Society for Quality Control (2004), ISO 9000 (2005), Kemp (2006), and Nelsen and Daniels (2007), seem inappropriate and uncompleted (invalid according to Routio’s 2009 criteria) as they ignore the continuous review of customer requirements (see Appendix 1).

By the same token, organization success depends largely on its ability to fulfil customer requirements (Barrows and Powers, 2009), but customers are only one group of the

organization's stakeholders and there are parties other than the customers that have a stake in the organization and what it does, but may not receive its product/service (Hoyle, 2007). For example, in the hotel industry these stakeholders are owners, supplier, investors, unions, government and society (Barrows and Powers, 2009). With this in mind, the term quality needs to be defined not only relative to customer requirements but also to other stakeholders' requirements as well (Hoyle, 2007). As a result, quality definitions such as those by Flood (1993), Oakland (2003), and Nelsen and Daniels (2007) (see Appendix 1), that ignore other stakeholders' requirements are invalid according to Routio's (2009) criteria.

Equally important, it is worth mentioning that some quality definitions use the term interested parties instead of stakeholders, such as those quality definitions by the International Organization for Standardization (ISO 9000:2005) and Ryall and Kruithof (2001) (see Appendix 1). Interested parties are defined as "a person or group having an interest in the performance or success of an organization" (ISO 9000, 2005:17). However, competitors, criminals and terrorists have an interest in the organization, but it is more likely to be malevolent than benevolent and in these cases the organization fights off their interests rather than seeking to fulfil their requirements or satisfy them, so for the previous reason, the appropriate (valid) word is stakeholders, not interested parties (Hoyle, 2007) .

Moreover, some authors refer to meeting customer expectations in defining quality, (e.g. Ryall and Kruithof, 2001; ISO 9000, 2005) (see Appendix 1). However, often customers do not know what their expectations are, particularly with infrequently purchased products and/or services (Cameron and Whetten, 1983; Lawrence and Reeves, 1993). For this reason, defining quality as meeting customer expectations is considered the most complex definition of quality and thus, the most difficult to measure (Reeves and Bednar, 1994). Therefore, referring to customer expectation in defining quality makes the definition unreliable, according to Routio's (2009) criteria. While, what the customers require from a product/ or service can be identified and fulfilled (measured), so the appropriate meaning of quality is to fulfil customer requirements, not customer expectations (Reeves and Bednar, 1994). Finally, some definitions of quality do not refer to the quality concept but refer to something else, such as Taguchi (1989) definition which defines non-quality rather than quality (see Appendix 1). So, it appears to be an invalid definition

of quality, according to Routio's (2009) criteria, because the definition does not match the concept (Logothetis, 1992).

To sum up, according to Routio's (2009) criteria, for any definition of quality to be valid, it must encompass the meaning of conformance to internal specifications (Shewhart, 1931) which are predetermined and required by customers (Crosby, 1979), and fulfils the continuously changing requirements (Bowie and Buttle, 2004) of both the organization customer and stakeholders (Hoyle, 2007). Moreover if anyone wants to measure it in any context (manufacture and service industry) the result should always be the same (Sebastianelli and Tamimi, 2002); in other words, it should be reliable according to Routio's (2009) criteria.

Given the previous discussion, the review of the literature failed to find a valid and reliable definition of quality. Therefore, the current study proposes a new definition of quality mainly drawn from ISO 9000 (2005) definition of quality as a universal definition introduced by the world's largest developer and publisher of international standards (ISO 9000, 2005), (see Appendix 1) with some modification to emphasise the continuous review of customer requirements in the definition and taking into consideration that the appropriate word to be used in the quality definition is stakeholders, not interested parties, as previously discussed. In light of the above, quality can be defined as below:

Quality is a situation when a set of inherent characteristics² consistently fulfil the continuously changing requirements of the organization's customers³ and other stakeholders.

² See ISO 2005 quality definition in Appendix 1 for more information about the inherent characteristics

³ Customers are a part of the organization's stakeholders but because they are the only part who pays and others receive their payment, they (customers) deserve to be mentioned separately in the definition.

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Appendix 1: Evaluation of quality definitions (literature review)

	Author	Definition	Routio's (2009) criteria	Details
	1- Tuchman (1980: 38)	Quality means "investment of the best skill and effort possible to produce the finest and most admirable results possible....You do it well or you do it half-well....Quality is achieving or reaching for the highest standard as against being satisfied with the sloppy or fraudulent....It does not allow compromise with the second-rate".	Valid <input type="checkbox"/> Reliable <input type="checkbox"/> No figurative language <input type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	Garvin (1984) called Tuchman (1980) definition of quality as the transcendent approach of philosophy. The transcendent definition of quality is derived from philosophy and borrows heavily from Plato's discussion of beauty (quality is synonymous with innate excellence (Seawright and Young, 1996). Producing an excellent product or service according to Tuchman (1980) definition provides strong benefits for human resource and marketing because the organizational vision that based upon introducing the 'best' may be more easier to be articulated than one aimed at introducing value for the customer. Moreover, obtaining employee agreement of and commitment to that vision may also be easier. Excellence often is the strategy for advertising campaigns in several industries such as automobiles (Reeves and Bednar, 1994). However, Tuchman's (1980) definition of quality is invalid, contains figurative language and is not reliable according to Routio's (2009) criteria because defining quality as excellence provides little practical directions to managers. How does one determine whether or to what extent excellence has been attained? Who determines the standards of excellence?" (Carol and David 1994:428). Moreover for researchers, a definition of quality as excellence makes it difficult, if not impossible, to measure (not reliable) and test the impact of quality on performance and other variables of interest (Garvin, 1984).
	2-Leffler (1982).	Quality is based on the presence or absence of a particular attribute. If an attribute is desirable, greater amounts of that attribute, under this definition, would label that product or service as one of a higher quality	Valid <input type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	Garvin (1984) called Tuchman (1980) definition of quality as the product based approach, where, in the economic literature, scholars such as (Schmalensee, 1970; Swan, 1971) evaluated quality as durability or long product life. They claimed that increases of product characteristics levels are equivalent to increase in quality. This definition of quality is reliable according to Routio's (2009) criteria because measuring quality according to this definition is an easy task, where the organization can monitor progress in achieving its goals by measuring the quantity of the desired attributes in the product (Reeves and Bednar, 1994). However, this definition is invalid according to Routio's criteria because according to this definition higher quality can only be obtained at higher cost as the quality reflects the quantity of attributes that a product contains, and because attributes are considered to be costly to produce, higher quality goods will be more expensive (Garvin, 1984). Moreover, quality under this definition may be inappropriate for services, especially when a high degree of human contact is involved (Reeves and Bednar, 1994).








☒ : Criteria was met








☐ : Criteria was not met

	3- Shewhart (1931) and Levitt (1972)	Quality is defined as conformance to specifications. Quality of conformance relates to the degree to which a product meets certain design standards.	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	<p>Garvin (1984) called Shewhart (1931) and Levitt (1972) definition of quality as the manufacturing based approach. This definition is reliable according to Routio's (2009) criteria because this definition gives a precise and objective measurement of quality (Sebastianelli and Tamimi, 2002). However this definition of quality is invalid according to Routio's (2009) criteria because customers may not know or care about how well the product conformed to internal specifications. Additionally, the internal focus of a conformance-to-specifications definition of quality makes it likely that a firm will be unaware of or ignore what competitors are doing. Thus, competitors may be driving customer requirements to new heights while a firm continues to meet internal specifications (Hofer & Schendel, 1978). As a result, Crosby [1979] revised this definition to be conformance to requirements. This modification strengthen Shewhart's (1931) and Levitt's (1972) definition of quality by meeting both the internal specification and the external customer needs so it can drive the organization towards both efficient and effective product delivery (Reeves and Bednar, 1994). However, after Crosby (1979) modification, this definition is still invalid according to Routio's (2009) criteria because of two reasons. First, customer is one of the stakeholders and there are parties other than the customer that have a stake in the organization and what it does but may not receive a product (Hoyle, 2007). Therefore, the term quality is not only to be defined relative to customer requirements but also to the other stakeholders requirements (Hoyle, 2007). Second, "what the customers (and other stakeholders) expect today is not what they expected yesterday and will not be what they will expect tomorrow. Similarly, what you can do for them today is not what you could do for them yesterday or what you will be able to do for them tomorrow" (Ryall and Kruithof, 2001:20).</p>
	4- Juran and Godfrey (1999:2.2).	Fitness for use. "the extent to which a product successfully serves the purposes of the user"	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	<p>Garvin (1984) called Juran and Godfrey's (1999) definition of quality as customer based approach. This definition has roots in the early definitions of quality as Juran (1951) claimed that quality is composed of two parts: the quality of design and the quality of conformance. Where quality of design refereed to providing satisfaction to customer by designing product that met their needs. He later coined the widely used 'fitness for use' definition of quality, where, use is apparently associated with customer requirements, and fitness suggests conformance to measurable product characteristics (Nanda, 2005). Juran and Godfrey's (1999) definition of quality is reliable according to Routio's (2009) criteria because both the internal specification and the customer requirements can be identified and then measured. However Juran and Godfrey's (1999) definition of quality is invalid according to Routio's (2009) criteria because it ignores the price (value) factor where product/service price may influence the level of the customer satisfaction (Sebastianelli and Tamimi, 2002). Moreover, it ignores the other stakeholders (apart from the customer) and their frequently changing requirements.</p>

		5) Feigenbaum (1951:10)	Quality is "best for certain customer conditions". Quality under this definition consists of a product or a service to a customer with certain characteristics at an expectable cost or price.	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	Garvin (1984) called Feigenbaum's (1951) definition of quality as value- based approach. It is worth to notice that the word <i>service</i> is not explicitly addressed in Feigenbaum's (1951) definition of quality until his third edition of his book (total quality control 1983:7). Additionally Broh, 1982; Ishikawa and Lu 1985 stated that the value-based quality definitions are an extension of user-based definitions where, quality is defined as fitness for use at an acceptable price. However, Feigenbaum's (1951) definition of quality takes into account two measurable factors (1) external effectiveness (the extent to which external customer requirements are met) and (2) internal efficiency (cost implications of internal conformance to specification) Reeves and Bednar, 1994). However this definition still is not reliable according to Routio's (2009) criteria because it is not easy to identify the individual components that go into a value judgment such that a manager or researcher would know (a) what components are essential and (b) what weights an individual gives to those components. For example, price might be the main concern in a value judgment for undifferentiated products such as compact discs, yet it might be a minor concern in a health-care situation (Reeves and Bednar, 1994). Additionally, this definition of quality is invalid according to Routio's (2009) criteria because value and quality are different concepts, value is understood by some to be a: subcomponent of quality, whereas others seen quality as a subcomponent of value (Stahl and Bounds, 1991). Likewise, it is invalid definition as it ignores the other stakeholders (apart from the customer) and their frequently changed requirements as previously explained.
	6- Taguchi (1987:1)	Quality is "the loss a product causes to society after being shipped, other than any losses caused by its intrinsic functions. This loss can be caused either by variability in the product's function or by adverse side effects"	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	Taguchi (1987) added one more approach in defining quality (the social loss approach). Where losses that are caused by harmful side effects are what economists called an external diseconomies of or consumption production, diseconomies of production happen when a producer's activities result in an uncompensated loss to others, Taguchi's social-loss function approach in defining quality would classically categorize cigarettes as low quality item because of the negative externalities related with their consumption, even if a the brand has both high conformance and customer demand (Russell and Miles, 1998). Taguchi's (1987) definition of quality is invalid and not reliable according to Routio's (2009) criteria as the definition does not match the concept. His definition may be refined as the cost of non-quality (Logothetis (1992: 13). Additionally, Flood (1993:32–33) claimed that Taguchi definition of quality may be useful in manufacturing industry not in service industry.	
7	Flood(1993:48)	"Quality means meeting customer(agreed) requirements, formal and informal, at the lowest cost, first time every time" Customers: may be internal or external to the organization	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/>	Flood (1993) has tried to strength his definition by including the meaning of different approaches in his definition such as the customer based vew, product, manufacture based view and the value based view as well, however his definition is still invalid and not reliable according to Routio's (2009) criteria as it ignores the other	

		<p>Agreed: means that there is an ideal to strive for but it needs to be agreed by all parties concerned(external customer and decision maker within an organisation)</p> <p>Requirements : measurable specifications(durability; reliability; accuracy; speed; method of delivery and price)</p> <p>Formal and informal : agreements made both in a formal business-like manner, and to those informally established through interaction (may be positive or negative) and must be assessed and managed</p> <p>Lowest cost : means that there is no unnecessary loss or waste in time, effort or material in the production and delivery of the product or service</p> <p>First time every time: sets an ideal to carry through a policy of 'no licences to fail'. In other words, according to agreed requirements, a company will not accept standards in product or service that fall below those expectations.</p>	<p>Not a vicious circle </p>	<p>stakeholders (apart from the customer) in the quality definition.</p>
8	Ryall and Kruithof (2001:20)	<p>"Quality is consistently meeting the continuously negotiated needs and expectations of Customers, in the context of the needs and expectations of other interested parties, in ways that create value and satisfaction for all involved"</p>	<p>Valid </p> <p>Reliable </p> <p>No figurative language </p> <p>Not a vicious circle </p>	<p>Ryall and Kruithof (2001) have tried to strength their definition by emphasizing some aspects such as the continuity aspect of the quality definition. Moreover this definition underlines- and for the first time- the needs of the organization interested parties.</p> <p>Additionally, the definition emphasizes on the win- win principle and value added concept for all the parties involved. However it still invalid and not reliable according to Routio's (2009) criteria for two reasons. Firstly, customer expectations are difficult to be measured. Second, perhaps the phtrase interested parties is not quite appropriate. ISO 9000:2005 defined an interested party as a person or group having an interest in the performance or success of an organization. But, Hoyle (2007) claimed that the organization may not have an interest in all of them. Consider for instance, competitors, criminals and terrorists. None of these has put anything into the organization and their interest is more likely to be malevolent than benevolent, so in these cases the organization fights off their interests rather than satisfying them. So a better word than interested parties would be stakeholders, for example customers, owners, employee, contractors, supplier, investors, unions, partners or society.</p>

9	Oakland(2003: 5)	"Meeting the customer requirements"	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	Oakland's (2003) definition of quality is reliable according to Routio's (2009) criteria as it allows researchers and managers to include some measurable factors such as (courtesy, helpfulness, confidence, and appearance) that are critical to customer judgments. Additionally, it is possible to determine what is essential to customer rather than establishing standards that are based on management judgments which may or may not be accurate (Reeves and Bednar, 1994). However, Oakland's (2003) definition of quality is invalid according to Routio's (2009) criteria as customer is one of the stakeholders and there are parties other than the customer that have a stake in the organization and what it does but may not receive a product. The term quality is not defined relative to customers but to requirements and these stakeholders do have requirements (Hoyle, 2007). Moreover, "what the customers (and other stakeholders) expect today is not what they expected yesterday and will not be what they will expect tomorrow. Similarly, what you can do for them today is not what you could do for them yesterday or what you will be able to do for them tomorrow" (Ryall and Kruthof, 2001:20).
10	American society for quality control (2004)	The total features and characteristics of a product or a service made or performed according to specifications to satisfy customers at the time of purchase and during use	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	This definition is invalid according to Routio's (2009) criteria as The definition fails to cover the requirements of the other stakeholders (apart from the customer) as previously explained.
11	Kemp (2006:331)	" all elements of our product that add value for the customer or stakeholders, or are required for our product or service to meet relevant standards and regulations"	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	Kemp's (2006) definition comprises not only the customer but also the organization stakeholders. Additionally, it includes the meaning of conformance to specifications and regulation. However it is invalid according to Routio's (2009) criteria as it fails to recognize the continuously changing requirements in the quality definition as previously explained, additionally it is not reliable as it raises some questions about which element should be included in the quality definition and how it will be measured. Moreover it has a figurative language as the meaning of added value is not clear.
12	Hoyle (2007:10)	"Quality is the extent to which a product or service successfully serves the purposes of the user during usage (not just at the point of sale)."	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	Hoyle's (2007) definition of quality comprises the advantage of both the product and user based view of quality definition and useful for the manufacturing and service industry. However, it is invalid and not reliable definition of quality according to Routio's (2009) criteria as it raises some questions about how that word 'extent' can be measured. Additionally it fails to consider the requirements of the all stakeholders not only the user.
13	Nelsen and Daniels(2007:54)	"quality have two meanings: 1. the characteristics of a product or service that bear on its ability to satisfy stated or implied needs; 2. a product or service free of deficiencies" .	Valid <input checked="" type="checkbox"/> Reliable <input checked="" type="checkbox"/> No figurative language <input checked="" type="checkbox"/> Not a vicious circle <input checked="" type="checkbox"/>	Nelsen and Daniels's (2007) definition of quality is invalid according to Routio's (2009) criteria as the two parts of this definition ignores the requirements of the organization stakeholders (apart from the customer) and focus either on the customer or on the product freedom of deficiencies. Additionally, the two parts of this definition fail to recognize the continuously changing requirements in the quality definition as previously explained.
14	Zairi et al	"A positive attempt by the organizations	Valid <input checked="" type="checkbox"/>	Zairi et al.'s (1994) definition of quality is invalid according to

	(1994)	concerned to improve structural, infrastructural, attitudinal, behavioural and methodological ways of delivering to the end customer, with emphasis on: consistency, improvements in quality, competitive enhancements, all with the aim of satisfying or delighting the end customer."	Reliable  No figurative language  Not a vicious circle 	Routio's (2009) criteria as the this definition ignores the requirements of the organization stakeholders (apart from the customer) and focuses only on the end customer .
14	UNI EN ISO 9000 (2005:17)	"Degree to which a set of inherent characteristics fulfils requirements" "Inherent", as opposed to "assigned", means existing in something, especially as a permanent characteristics. Requirement: Need or expectation that is stated, generally implied or obligatory. "Generally implied" means that it is custom or common practice for the organization, its Customers and other interested parties Organization: Group of people and facilities with an arrangement of responsibilities, authorities and relationships. Customer: Organization or person that receives a product. Interested party: Person or group having an interest in the performance or success of an organization. Example: Customers, owners, people in an organization, supplier, bankers, unions, partners or society.	Valid  Reliable  No figurative language  Not a vicious circle 	ISO definition of quality is a universal definition and adopted by a wide range of organizations all over the world both manufacturing and service organizations as it successfully covers a lot of aspects in defining quality including customer requirements, and product and/or service conformance to predetermined characteristics. However, this definition is not reliable according to Routio's (2009) criteria because customer expectation cannot be measured as customers do not know what their expectations are, particularly with infrequently purchase of product and/or service (Cameron and Whetten, 1983; Lawrence and Reeves, 1993). Additionally, this definition is invalid according to Routio's (2009) criteria as organization interested parties concept may be inappropriate and the better word should be stakeholders (explained in details before), and finally this definition fails to cover the continuous review of the quality definition as previously discussed.